

Application No.: 10/604,627
Docket NO.:11112-US-PA
Customer No. 31561

Claims Amendments

Please amend the claims according to the following listing of claims and substitute it for all prior versions and listings of claims in the application.

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1. (currently amended) A resistance random access memory structure,

comprising:

a plurality of word lines in a substrate;

10 a plurality of reset lines coupled to said word lines, wherein said reset lines are set on the surface of said word lines, and a material of said reset lines is comprised of a metal;

a dielectric layer on said substrate;

15 a plurality of memory units in said dielectric layer, each said memory including a bottom electrode, a top electrode, and a resistive thin film between said top electrode and said bottom electrode, said bottom electrodes of said memory units in a same column being coupled to one of said reset lines; and

20 a plurality of said bit lines on said memory units, said top electrodes of said memory units in a same row being coupled to one of said bit lines.

2. (original) The resistance random access memory structure of claim 1, 25 wherein said reset lines are set in said word lines, the ion type of said reset lines being opposite to the ion type of said word lines.

3. (cancelled)

4. (original) The resistance random access memory structure of claim 1, further comprising a plurality of word line contact windows in said dielectric layer, 25 wherein each of said word line contact windows are coupled to one of said word lines.

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5. (original) The resistance random access memory structure of claim 4,
further comprising a plurality of doped regions in said word lines, wherein each of
said doped regions are coupled to one of said word line contact windows, and wherein
an ion types of said doped regions and said word lines is same.

5 6. (canceled).

7. (original) The resistance random access memory structure of claim 1,
wherein said memory units in a same column are set on a surface of said reset lines.

8. (original) The resistance random access memory structure of claim 1,
wherein said resistive thin film material is resistance-reversible.

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9. (original) The resistance random access memory structure of claim 1, wherein said resistive thin film material is selected from colossal magneto resistive thin films and oxidation thin films having Perovskite structure.

Claims 10-17 (cancelled)

5 18. (previously presented) A resistance random access memory structure, comprising:

a plurality of word lines in a substrate;

a plurality of reset lines coupled to said word lines;

a dielectric layer on said substrate;

10 a plurality of memory units in said dielectric layer, each said memory including a bottom electrode, a top electrode, and a resistive thin film between said top electrode and said bottom electrode, said bottom electrodes of said memory units in a same column being coupled to one of said reset lines;

15 a plurality of said bit lines on said memory units, said top electrodes of said memory units in a same row being coupled to one of said bit lines; and

a plurality of reset line contact windows in said dielectric layer, each of said reset line contact windows being coupled to one of said reset lines..

19. (previously presented) The resistance random access memory structure of claim 18, wherein said reset lines are set in said word lines, the ion type of said 20 reset lines being opposite to the ion type of said word lines.

20. (previously presented) The resistance random access memory structure of claim 18, wherein said reset lines are set on the surface of said word lines, and wherein the material of said reset lines is comprised of a metal.

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21. (previously presented) The resistance random access memory structure of claim 18, further comprising a plurality of word line contact windows in said dielectric layer, wherein each of said word line contact windows are coupled to one of said word lines.

5 22. (previously presented) The resistance random access memory structure of claim 21, further comprising a plurality of doped regions in said word lines, wherein each of said doped regions are coupled to one of said word line contact windows, and wherein an ion types of said doped regions and said word lines is same.

10 23. (previously presented) The resistance random access memory structure of claim 18, wherein said memory units in a same column are set on a surface of said reset lines.

24. (previously presented) The resistance random access memory structure of claim 8, wherein said resistive thin film material is resistance-reversible.

15 25. (previously presented) The resistance random access memory structure of claim 18, wherein said resistive thin film material is selected from colossal magneto resistive thin films and oxidation thin films having Perovskite structure.